CLAIMS

1. A computer system comprising:

a memory operable to store a computer program;

control circuitry for issuing a plurality of commands in response to the computer program, the plurality of commands comprising a request to establish a line connection according to a specified one of a plurality of modes;

a first modem coupled to the control circuitry and for receiving the plurality of commands and for communicating with a second modem according to the line connection;

wherein a first of the plurality of modes is such that the requested line connection between the first modem and the second modem is for a first period of time; and

wherein a second of the plurality of modes is such that the requested line connection between the first modem and the second modem is for a second period of time having a different duration than the first period of time.

2. The computer system of Claim 1 wherein the first period of time is determined by control circuitry associated with the second modem in response to a fee paid by a user of the first modem.

3. The computer system of Claim 2 wherein the second period of time is unlimited.

4. The computer system of Claim 1 wherein the first period of time is determined by control circuitry associated with the second modem in response to a time of day when the first modem issues a message to the second modem seeking establish the line connection.

5. The computer system of Claim 4 wherein the second period of time is unlimited.

6. The computer system of Claim 1 wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of framing protocols.

7. The computer system of Claim 1 wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of signaling protocols.

8. The computer system of Claim 1 wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of data rates.

9. The computer system of Claim 8 wherein the plurality of commands further comprises a request that specifies whether the specified one of a plurality of data rates corresponds to communication from the first modem to the second modem or communication from the second modem to the first modem.

10. The computer system of Claim 1:

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of framing protocols; and

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of signaling protocols.

11. The computer system of Claim 1:

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of data rates; and

wherein the plurality of commands further comprises a request that specifies whether the specified one of a plurality of data rates corresponds to communication from the first modem to the second modem or communication from the second modem to the first modem.

12. The computer system of Claim 1:

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of framing protocols;

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of signaling protocols; and

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of data rates.

13. The computer system of Claim 12 wherein the plurality of commands further comprises a request that specifies whether the specified one of a plurality of data rates corresponds to communication from the first modem to the second modem or communication from the second modem to the first modem.

14. The computer system of Claim 1 and further comprising a computer cabinet, wherein the modem and control circuitry are internally located within the computer cabinet.

15. The computer system of Claim 1:

wherein the first of the plurality of modes is such that a requested line connection is granted in response to a request to establish a line connection according to the first of the plurality of modes; and

wherein the second of the plurality of modes is such that a requested line connection is granted in response to:

first, a request to establish a line connection according to the second of the plurality of modes; and

second, a request from the first modem to the second modem to complete a link layer connection.

16. The computer system of Claim 1 wherein the plurality of commands further comprise a request for a quality of service to be issued by the control circuitry after a request to establish a line connection according to the first of the plurality of modes.

17. The computer system of Claim 16 wherein the quality of service comprises a bit rate parameter selecting between a constant bit rate and a variable bit rate.

18. The computer system of Claim 17 wherein the quality of service comprises a priority parameter.

19. The computer system of Claim 18 wherein the priority parameter assigns a priority to a connection between the first modem and the second modem relative to a connection between the second modem and a third modem.

20. The computer system of Claim 18 wherein the priority parameter assigns a priority to a connection between the first modem and the second modem relating to a first application program which is readable into the memory and executable by the control circuitry and relative to a second application program which is readable into the memory and executable by the control circuitry.

21. The computer system of Claim 1:

wherein the control circuitry is coupled for communicating with a TAPI protocol;

wherein the first period of time is less than the second period of time; and

wherein the request to establish a line connection according to the first of the plurality of modes is compatible with the TAPI protocol.

22. The computer system of Claim 1:

wherein the first period of time is less than the second period of time; and

wherein the computer program is configured to cause the control circuitry to request to establish a line connection according to the second of the plurality of modes during initialization of the control circuitry.

23. The computer system of Claim 1:

wherein the control circuitry is coupled for communicating with a TAPI protocol;

wherein the plurality of commands further comprise a request for a quality of service to be issued by the control circuitry after a request to establish a line connection according to the first of the plurality of modes;

wherein the request to establish a line connection according to the first of the plurality of modes is compatible with the TAPI protocol, the TAPI protocol configured to receive a number from the control circuitry in a form representing a telephone number; and

wherein the telephone number is for transmitting by the first modem to the second number as representing the request for quality of service.

24. The computer system of Claim 1 wherein the first modem and the second modem each comprise a DSL modem.

25. The computer-system of Claim 24 wherein the first modem is for connecting, via a twisted pair conductor, to a second modem located in a telephone company central office.

26. The computer system of Claim 25:

wherein the second modem is further coupled to communicate with a backbone network;

wherein the backbone network is coupled to communicate with the Internet; and

wherein information may be communicated between the first modem and the Internet via the second modem.

27. The computer system of Claim 1 wherein the control circuitry for issuing a plurality of commands in response to the computer program comprises a central processing unit.

28. The computer system of Claim 1 wherein the control circuitry for issuing a plurality of commands in response to the computer program comprises a host controller.

29. The computer system of Claim 1 wherein the first modem comprises at least one digital signal processor for receiving the plurality of commands.

30. A first modem comprising:

an interface for coupling to a host computer, wherein the host computer has a memory operable to store a computer program and control circuitry for receiving a plurality of commands in response to the computer program, the plurality of commands comprising a request to establish a line connection according to a specified one of a plurality of modes;

processing circuitry responsive to the plurality of commands, and for issuing messages to a second modem in response to certain ones of the plurality of commands;

wherein for a first of the plurality of modes the processing circuitry transmits a message to the second modem such that the requested line connection between the first modem and the second modem is for a first period of time; and

wherein for a second of the plurality of modes the processing circuitry transmits a message to the second modem such that the requested line connection between the first modem and the second modem is for a second period of time having a different duration than the first period of time.

31. The first modem of Claim 30 wherein the first period of time is determined by control circuitry associated with the second modem in response to a fee paid by a user of the first modem.

32. The first modem of Claim 30 wherein the second period of time is unlimited.

33. The first modem of Claim 30 wherein the first period of time is determined by control circuitry associated with the second modem in response to a time of day when the processing circuitry transmits a message to the second modem seeking establish the line connection.

34. The first modem of Claim 33 wherein the second period of time is unlimited.

35. The first modem of Claim 30 wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of framing protocols.

36. The first modem of Claim 30 wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of signaling protocols.

37. The first modem of Claim 30 wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of data rates.

38. The first modem of Claim 37 wherein the plurality of commands further comprises a request that specifies whether the specified one of a plurality of data rates corresponds to communication from the first modem to the second modem or communication from the second modem to the first modem.

39. The first modem of Claim 30:

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of framing protocols; and

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of signaling protocols.

40. The first modem of Claim 30:

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of data rates; and

wherein the plurality of commands further comprises a request that specifies whether the specified one of a plurality of data rates corresponds to communication from the first modem to the second modem or communication from the second modem to the first modem.

41. The computer system of Claim 30:

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of framing protocols;

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of signaling protocols; and

wherein the plurality of commands further comprises a request to establish a line connection according to a specified one of a plurality of data rates.

42. The first modem of Claim 41 wherein the plurality of commands further comprises a request that specifies whether the specified one of a plurality of data rates corresponds to communication from the first modem to the second modem or communication from the second modem to the first modem.

43. The first modem of Claim 30:

wherein the first of the plurality of modes is such that a requested line connection is granted in response to a request to establish a line connection according to the first of the plurality of modes; and

wherein the second of the plurality of modes is such that a requested line connection is granted in response to:

first, a request to establish a line connection according to the second of the plurality of modes; and

second, a request from the first modem to the second modem to complete a link layer connection.

44. The first modem of Claim 30:

wherein the plurality of commands further comprise a request for a quality of service to be issued by the control circuitry after a request to establish a line connection according to the first of the plurality of modes; and

wherein the processing circuitry issues a message to the second modem in response to and including parameters indicating the quality of service.

45. The first modem of Claim 44 wherein the quality of service comprises a bit rate parameter selecting between a constant bit rate and a variable bit rate.

46. The first modem of Claim 45 wherein the quality of service comprises a priority parameter.

47. The first modem of Claim 46 wherein the priority parameter assigns a priority to a connection between the first modem and the second modem relative to a connection between the second modem and a third modem.

48. The first modem of Claim 46 wherein the priority parameter assigns a priority to a connection between the first modem and the second modem relating to a first application program which is readable into the memory and executable by the control circuitry and relative to a second application program which is readable into the memory and executable by the control circuitry.

49. The first modem of Claim 30:

wherein the control circuitry is coupled for communicating with a TAPI protocol;

wherein the first period of time is less than the second period of time; and

wherein the request to establish a line connection according to the first of the plurality of modes is compatible with the TAPI protocol.

50. The first modem of Claim 30:

wherein the first period of time is less than the second period of time; and

wherein the computer program is configured to cause the control circuitry to request to establish a line connection according to the second of the plurality of modes during initialization of the control circuitry.

51. The first modem of Claim 30:

wherein the control circuitry is coupled for communicating with a TAPI protocol;

wherein the plurality of commands further comprise a request for a quality of service to be issued by the control circuitry after a request to establish a line connection according to the first of the plurality of modes;

wherein the request to establish a line connection according to the first of the plurality of modes is compatible with the TAPI protocol, the TAPI protocol configured to receive a number from the control circuitry in a form representing a telephone number; and

wherein the telephone number is for transmitting by the first modem to the second number as representing the request for quality of service.

52. The first modem of Claim 30 wherein each of the first modem and the second modem comprises a DSL modem.

53. The first modem of Claim 30 wherein the first modem is for connecting, via a twisted pair conductor, to a second modem located in a telephone company central office.

54. The computer system of Claim 30:

wherein the second modem is further coupled to communicate with a backbone network;

wherein the backbone network is coupled to communicate with the Internet; and

wherein information may be communicated between the first modem and the Internet via the second modem.

55. The first modem of Claim 30 wherein the processing circuitry comprises at least one digital signal processor.

56. A method of communicating between a first modem and a second modem, comprising the steps of:

receiving from control circuitry of a host computer coupled to the first modem a plurality of commands in response to a computer program in a memory of the host computer storing a computer program, the plurality of commands comprising a request to establish a line connection according to a specified one of a plurality of modes;

communicating from the first modem toward the second modem a message corresponding to the request to establish a line connection according to a specified one of a plurality of modes;

wherein a first of the plurality of modes is such that the requested line connection between the first modem and the second modem is for a first period of time; and

wherein a second of the plurality of modes is such that the requested line connection between the first modem and the second modem is for a second period of time having a different duration than the first period of time.

57. The method of Claim 56 wherein the first period of time is determined by control circuitry associated with the second modem in response to a fee paid by a user of the first modem.

58. The method of Claim 56 wherein the second period of time is unlimited.

59. The method of Claim 56 wherein the first period of time is determined by control circuitry associated with the second modem in response to a time of day when the first modem issues a message to the second modem seeking establish the line connection.

60. The method of Claim 59 wherein the second period of time is unlimited.

61. The method of Claim 56 wherein the plurality of commands further comprise a request for a quality of service to be issued by the control circuitry after a request to establish a line connection according to the first of the plurality of modes.

62. The method of Claim 61 wherein the quality of service comprises a bit rate parameter selecting between a constant bit rate and a variable bit rate.

63. The method of Claim 62 wherein the quality of service comprises a priority parameter.

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